



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,954	08/31/2005	Ahmed Kefi-Cherif	271539US2XPCT	8036
22850 7590 05/05/2008 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER LE, DAVID D				
ART UNIT 3681		PAPER NUMBER		
NOTIFICATION DATE 05/05/2008		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

### Office Action Summary

**Application No.**

10/533,954

**Applicant(s)**

KEFTI-CHERIF ET AL.

**Examiner**

David D. Le

**Art Unit**

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 31-41 and 43-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 31-41 and 43-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 October 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This is the third Office action on the merits of Application No. 10/533,954, filed 31 August 2005. Claims 31-41 and 43-60 are pending.

### **Documents**

2. The following documents have been received and filed as part of the patent application:
  - Three Foreign Priority Documents, received on 05/04/05
  - Information Disclosure Statement, received on 05/04/05
  - Declaration and Power of Attorney, received on 08/31/05
  - Drawings, received on 10/25/07

### ***Continued Examination Under 37 CFR 1.114***

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05 March 2008 has been entered.

### ***Allowable Subject Matter***

4. The indicated allowability of claims 31-40 and 51-60 are withdrawn in view of the below 35 U.S.C. §112, second paragraph.

***Claim Objections***

5. Claim 60 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Dependent claim 60, lines 21-22, recites the limitation "at least three modes of operation" while the independent claim 51, line 2, recites "two modes of operation". Clearly, the claimed recitation "at least three modes of operation" of the dependent claim 60 fails to further limit the claimed recitation "two modes of operation" of the independent claim 51.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **Claims 31-41 and 43-60 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

**Claim 31:**

- Line 7 recites the limitation "a primary power train". It is unclear whether this newly recited "a primary power train" is different from the two power trains, as first mentioned on line 3 of claim 31.

- Line 7 recites the limitation “a compound gearset”. It is unclear whether this newly recited “a compound gearset” is different from the two epicyclic gearsets, which is first recited on line 4 of claim 31.
- Lines 7-8 recite the limitations “a first epicyclic gearset” and “a second epicyclic gearset”. It is unclear whether these newly recited limitations “a first epicyclic gearset” and “a second epicyclic gearset” are different the two epicyclic gearsets, which is first recited on line 4 of claim 31.
- Line 9 recites the limitation “a secondary power train”. It is unclear whether this newly recited “a secondary power train” is different from the two power trains, as first mentioned on line 3 of claim 31.
- Line 9 recites the limitation “an epicyclic gearset”. It is unclear whether this newly recited “an epicyclic gearset” is different from the two epicyclic gearsets, which is first recited on line 4 of claim 31.
- Lines 13-14 recite the limitation “a plurality of modes of operation”. It is unclear whether this newly recited limitation “a plurality of modes of operation” is different from the two modes of operation, which is first recited on line 2 of claim 31.
- Line 15 recites the limitation “a reducing stage”. It is unclear whether this newly recited limitation “a reducing stage” is different from the one reducing stage, which is first recited on line 4 of claim 31, since line 4 of claim 31 recites “one reducing stage”.

Claim 32:

- Line 2 recites the limitation “a reducing stage”. It is unclear whether this newly recited limitation “a reducing stage” is different from the one reducing stage, which is first recited on line 4 of claim 31, since line 4 of claim 31 recites “one reducing stage”.
- Line 2 recites the limitation “gear ratio  $K_0$ ”. It is unclear whether the “ $K_0$ ” is a ratio value or a reference character.
- Line 5 recites the limitation “a compound epicyclic gearset”. It is unclear whether this newly recited limitation “a compound epicyclic gearset” is different from the compound gearset, which is first recited on line 7 of claim 31.
- Line 6 recites the limitation “the primary power-splitting pathway”. There is insufficient antecedent basis for this limitation in the claim.

Claim 33:

- Line 2 recites the limitation “a reducing stage”. It is unclear whether this newly recited limitation “a reducing stage” is different from the one reducing stage, which is first recited on line 4 of claim 31, since line 4 of claim 31 recites “one reducing stage”.

Claim 34:

- Line 2 recites the limitation “a reducing stage”. It is unclear whether this newly recited limitation “a reducing stage” is different from the one reducing stage,

which is first recited on line 4 of claim 31, since line 4 of claim 31 recites “one reducing stage”.

- Lines 2-3 recite the limitation “gear ratio  $K_{e2}$ ”. It is unclear whether the “ $K_{e2}$ ” is a ratio value or a reference character.

Claim 35:

- Line 4 recites the limitation “the second compound epicyclic gearset”. There is insufficient antecedent basis for this limitation in the claim.
- Line 7 recites the limitation “the planet carrier”. It is unclear whether the mentioned recitation “the planet carrier” is referring to the planet carrier of the first epicyclic gearset or the planet carrier of the second epicyclic gearset.

Claim 37:

- Line 13 recites the limitation “a second electric machine”. It is unclear whether this newly recited limitation “a second electric machine” is different from the two electric machines, which is first recited on line 4 of claim 31.
- Line 14 recites the limitation “the sun gear”. There is insufficient antecedent basis for this limitation in the claim.
- Lines 15-16 recite the limitation “a first electric machine”. It is unclear whether this newly recited limitation “a first electric machine” is different from the two electric machines, which is first recited on line 4 of claim 31.

Claim 38:

- Line 3 recites the limitation “the brake”. It is unclear whether the mentioned limitation “the brake” is referring to the second brake, which is first recited on line 6 of claim 37.
- Line 4 recites “it”. It is unclear what “it” is referring to.

Claim 39:

- Line 3 recites the limitation “the brake”. It is unclear whether the mentioned limitation “the brake” is referring to the second brake, which is first recited on line 6 of claim 37.
- Line 4 recites the limitation “the planet carrier”. It is unclear whether the mentioned recitation “the planet carrier” is referring to the planet carrier of the first epicyclic gearset, the planet carrier of the second epicyclic gearset, or the planet carrier of the third epicyclic gearset.
- Line 4 recites “it”. It is unclear what “it” is referring to.

Claim 40:

- Line 12 recites the limitation “a speed of rotation and/or a torque”. It is unclear whether the limitation should be construed as --a speed of rotation and a torque-- or --a speed of rotation or a torque--.
- Lines 12-13 recite the limitation “an armature voltage and/or an armature current”. It is unclear whether the limitation should be construed as --an armature



voltage and an armature current-- or --an armature voltage or an armature current--.

- Line 18 recites the limitation “of a first brake and/or of a second brake”. It is unclear whether the limitation should be construed as --of a first brake and of a second brake-- or --of a first brake or of a second brake--.

Claim 41:

- Line 11 recites the limitation “a first power train”. It is unclear whether this newly recited limitation “a first power train” is different from the two power trains, which is first recited on line 3 of claim 41.
- Line 12 recites the limitation “a first epicyclic gearset”. It is unclear whether this newly recited limitation “a first epicyclic gearset” is different from the two epicyclic gearsets, which is first recited on line 4 of claim 41.
- Line 14 recites the limitation “the ring gear”. There is insufficient antecedent basis for this limitation in the claim.

Claim 43:

- Lines 2-3 recite the limitation “a second epicyclic gearset”. It is unclear whether this newly recited limitation “a second epicyclic gearset” is different from the two epicyclic gearsets, which is first recited on line 4 of claim 41.

- Line 5 recites the limitation “a first electric machine”. It is unclear whether this newly recited limitation “a first electric machine” is different from the two electric machines, which is first recited on line 4 of claim 41.

Claim 44:

- Line 3 recites the limitation “the reducing stage”. This limitation appears to be inaccurate because, as shown in Figs. 3 and 5, the mentioned reducing stage connects the internal combustion engine to either the planet carrier of the first epicyclic gearset or the planet carrier of the second epicyclic gearset, not both.

Claim 45:

- Line 2 recites the limitation “a second electric machine”. It is unclear whether this newly recited limitation “a second electric machine” is different from the two electric machines, which is first recited on line 4 of claim 41.

Claim 48:

- Line 2 recites the limitation “a second epicyclic gearset”. It is unclear whether this newly recited limitation “a second epicyclic gearset” is different from the two epicyclic gearsets, which is first recited on line 4 of claim 41.
- Lines 4-5 recite the limitation “the ring gear”. There is insufficient antecedent basis for this limitation in the claim.

- Line 5 recites the limitation "the planet carrier". There is insufficient antecedent basis for this limitation in the claim.
- Line 6 recites the limitation "the shaft". It is unclear whether the mentioned limitation "the shaft" is referring to the shaft of the sun gear of the second epicyclic gearset or the shaft of the sun gear of the third epicyclic gearset.
- Line 7 recites the limitation "a second electric machine". It is unclear whether this newly recited limitation "a second electric machine" is different from the two electric machines, which is first recited on line 4 of claim 41.

Claim 49:

- Lines 1-2 recite the limitation "a first electric machine". It is unclear whether this newly recited limitation "a first electric machine" is different from the two electric machines, which is first recited on line 4 of claim 41.
- Line 5 recites the limitation "a ring gear of the first epicyclic gearset". It is unclear whether this newly recited limitation "a ring gear of the first epicyclic gearset" is different from the one, which is first recited on lines 14-15 of claim 41.

Claim 50:

- Line 12 recites the limitation "a speed of rotation and/or a torque". It is unclear whether the limitation should be construed as --a speed of rotation and a torque-- or --a speed of rotation or a torque--.

- Lines 12-13 recite the limitation “an armature voltage and/or an armature current”. It is unclear whether the limitation should be construed as --an armature voltage and an armature current-- or --an armature voltage or an armature current--.
- Line 18 recites the limitation “of a clutch and/or of a brake”. It is unclear whether the limitation should be construed as --of a clutch and of a brake-- or --of a clutch or of a brake--.

Claim 51:

- Line 11 recites the limitation “the first and second power-steering trains”. There is insufficient antecedent basis for this limitation in the claim.
- Line 14 recites the limitation “at least two modes of operation”. This claimed limitation appears to contradict the recitation “two modes of operation”, which is first recited on line 2 of claim 51.
- Line 16 recites the limitation “a first epicyclic gearset”. It is unclear whether this newly recited limitation “a first epicyclic gearset” is different from the two epicyclic gearsets, which is first recited on line 4 of claim 51.

Claim 52:

- Line 4 recites the limitation “a reducing stage”. It is unclear whether this newly recited limitation “a reducing stage” is different from the one reducing stage,

which is first recited on line 4 of claim 51, since line 4 of claim 51 recites “one reducing stage”.

- Lines 5-6 recite the limitation “a second epicyclic gearset”. It is unclear whether this newly recited limitation “a second epicyclic gearset” is different from the two epicyclic gearsets, which is first recited on line 4 of claim 51.

Claim 53:

- Line 3 recites the limitation “a second electric machine”. It is unclear whether this newly recited limitation “a second electric machine” is different from the two electric machines, which is first recited on line 4 of claim 51.
- Line 4 recites the limitation “a first electric machine”. It is unclear whether this newly recited limitation “a first electric machine” is different from the two electric machines, which is first recited on line 4 of claim 51.
- Line 5 recites the limitation “a reducing stage”. It is unclear whether this newly recited limitation “a reducing stage” is different from the one reducing stage, which is first recited on line 4 of claim 51, since line 4 of claim 51 recites “one reducing stage”.
- Line 7 recites the limitation “second compound gearset”. It is unclear whether this newly recited limitation “second compound gearset” is different from the one, which is first recited on line 9 of claim 51.

- Line 8 recites the limitation “a second epicyclic gearset”. It is unclear whether this newly recited limitation “a second epicyclic gearset” is different from the two epicyclic gearsets, which is first recited on line 4 of claim 51.
- Line 15 recites the limitation “the third epicyclic gearset”. There is insufficient antecedent basis for this limitation in the claim.

Claim 54:

- Line 3 recites the limitation “the compound mode-changing gearset”. There is insufficient antecedent basis for this limitation in the claim.
- Line 6 recites the limitation “the output shaft”. There is insufficient antecedent basis for this limitation in the claim.
- Lines 13-14 recites the limitation “the planet carrier”. There is insufficient antecedent basis for this limitation in the claim.

Claim 55:

- Line 3 recites the limitation “the planet carrier”. It is unclear which planet carrier that the claimed limitation is referring to.

Claim 56:

- Line 3 recites the limitation “a first electric machine”. It is unclear whether this newly recited limitation “a first electric machine” is different from the two electric machines, which is first recited on line 4 of claim 51.

Claim 57:

- Line 2 recites the limitation "the sun gear". There is insufficient antecedent basis for this limitation in the claim.
- Line 4 recites the limitation "the planet carrier". There is insufficient antecedent basis for this limitation in the claim.
- Line 10 recites the limitation "the ring gear". There is insufficient antecedent basis for this limitation in the claim.
- Line 12 recites the limitation "the planet carrier". There is insufficient antecedent basis for this limitation in the claim.
- Line 13 recites "its". It is unclear what "its" is referring to.

Claim 58:

- Line 3 recites the limitation "a second electric machine". It is unclear whether this newly recited limitation "a second electric machine" is different from the two electric machines, which is first recited on line 4 of claim 51.

Claim 60:

- Line 14 recites the limitation "a speed of rotation and/or a torque". It is unclear whether the limitation should be construed as --a speed of rotation and a torque-- or --a speed of rotation or a torque--.

- Lines 14-15 recite the limitation “an armature voltage and/or an armature current”. It is unclear whether the limitation should be construed as --an armature voltage and an armature current-- or --an armature voltage or an armature current--.
- Line 21 recites the limitation “of a first brake and/or of a second brake”. It is unclear whether the limitation should be construed as --of a first brake and of a second brake-- or --of a first brake or of a second brake--.
- Line 25 recites the limitation “the planet carrier”. It is unclear which planet carrier that the claimed limitation is referring to.
- Line 26 recites the limitation “the ring gear”. It is unclear which planet carrier that the claimed limitation is referring to.
- Lines 27-28 recite the limitation “the ring gear”. It is unclear which planet carrier that the claimed limitation is referring to.
- Line 28 recites the limitation “the common planet carrier”. It is unclear which planet carrier that the claimed limitation is referring to.
- Lines 28-29 recite the limitation “the common sun gear”. It is unclear which planet carrier that the claimed limitation is referring to.
- Line 33 recites the limitation “the primary power-splitting train”. It is unclear which planet carrier that the claimed limitation is referring to.
- Line 37 recites the limitation “the ring gear”. It is unclear which planet carrier that the claimed limitation is referring to.



***Response to Arguments***

8. Applicant's arguments with respect to claims 41-50 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 571-272-7092. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David D. Le/  
Primary Examiner, Art Unit 3681  
04/28/2008